

Application Serial No.: 10/699,184
Art Unit: 2853

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed November 8, 2005. Reconsideration and allowance of the application and pending claims are respectfully requested.

1. **Allowable Subject Matter**

Applicants appreciate the Examiner's indication that claims 4, 7-12, 18-24, 31-34, 39, and 40 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In that it is believed that every rejection has been overcome, it is respectfully submitted that each of the claims that remains in the case is presently in condition for allowance.

2. **Response To Rejections of Claims Under 35 U.S.C. §102**

Claims 1-3, 5, 6, 13, 25-30, and 35-37 have been rejected under 35 U.S.C. §102(b) as being anticipated by *Scheffelin* (U.S. Patent No. 6,394,580). Applicants respectfully traverse this rejection.

It is axiomatic that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed subject matter must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(b). In the present case, not every feature of the claimed subject matter is represented in the *Scheffelin* reference. Applicants discuss the *Scheffelin* reference and Applicants' claims in the following.

a. **Claim 1**

As provided in independent claim 1, Applicants claim:

A fluid ejection device for receiving a signal and ejecting fluid in response thereto, comprising:

an ink ejecting nozzle layer having a substrate with first and second surfaces joined along an edge;

an insulating feature located on the first surface adjacent the edge;
and

a flexible lead that bends around the edge and lies flush against the insulating feature.

(Emphasis added).

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Applicants respectfully submit that independent claim 1 is allowable for at least the reason that *Scheffelin* does not disclose, teach, or suggest at least "an ink ejecting nozzle layer having a substrate with first and second surfaces joined along an edge," "an insulating feature located on the first surface adjacent the edge," or "a flexible lead that bends around the edge and lies flush against the insulating feature," as recited and emphasized above in claim 1.

In expressing the rejection of claim 1, the Office Action states that the claimed substrate is disclosed by multi-layer substrate 34 in *Scheffelin*. However, multi-layer substrate 34 is associated with an electronic interface system 60 (as shown in FIG. 6 of *Scheffelin*) and not an ink ejecting nozzle layer, as described in the claim. The Office Action also states that the claimed insulating feature is disclosed by item 74 in FIG. 7. However, this figure also refers to a portion of the electrical interface system 60 and does not describe an ink ejecting nozzle layer, as described in the claim.

Additionally, the Office Action states that the claimed flexible lead that lies flush against the insulating feature is disclosed by item 68 of FIG. 6 in the *Scheffelin* reference. However, item 68 is a wire bond lead that is also part of the electronic interface system, where the wire bond lead does not lie flush with an insulating feature. Rather, as shown in FIG. 6, wire bond lead 68 is coupled to bond pads 41, 66, where one of the bond pads is coupled to a conductive path 64 extending through multi-layer substrate 34. As a result, wire bond lead 68 is not generally shown to lie flush against an insulating feature and in particular, is not shown to lie flush against an insulating feature located on a first surface adjacent an edge joining the first and second surfaces of a substrate of an ink ejecting nozzle layer, as described in the claim.

For at least the aforementioned reasons, *Scheffelin* does not teach or suggest at least all of the claimed features of claim 1. Therefore, claim 1 is not anticipated by *Scheffelin*, and the rejection should be withdrawn for at least this reason alone.

b. Claims 2-3, 5-6, and 13

Because independent claim 1 is allowable over the cited art of record, dependent claims 2-3, 5-6, and 13 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that the dependent claims contain all the elements and features of independent claim 1. For at least this reason, the rejections of claims 2-3, 5-6, and 13 should be withdrawn.

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Additionally and notwithstanding the foregoing reasons for the allowability of claims 2-3, 5-6, and 13, these dependent claims recite further features/steps and/or combinations of features/steps (as is apparent by examination of the claims themselves) that are patentably distinct from the cited art of record. Hence, there are other reasons why these dependent claims are allowable.

As an illustrative example, the Office Action states that the "primer layer" of claim 2 is disclosed by item 74 in *Scheffelin*, which is shown in FIG. 7. The Office Action then suggests that the characteristics of the primer layer described in claim 3 are disclosed by elements of FIG. 4. However, FIG. 4 and FIG. 7 of *Scheffelin* respectively show a printhead die 40 and a substrate 34 of an electronic interface system which are distinct components (as shown in FIG. 6). In particular, FIG. 7 does not show the elements of FIG. 4 and vice versa. As a result, *Scheffelin* fails to teach or suggest the claimed features of claim 3, for at least these reasons.

c. **Claim 25**

As provided in independent claim 25, Applicants claim:

A fluid ejection device, comprising:
means for defining a nozzle;
means for supporting the means for defining;
means for ejecting fluid from the nozzle in response to a firing signal;
means for receiving the firing signal; and
means for insulating the means for receiving from the means for supporting, wherein the means for receiving lies flush against the means for insulating.

(Emphasis added).

Applicants respectfully submit that independent claim 25 is allowable for at least the reason that *Scheffelin* does not disclose, teach, or suggest at least "means for insulating the means for receiving from the means for supporting, wherein the means for receiving lies flush against the means for insulating," as recited and emphasized above in claim 25.

In expressing the rejection of claim 25, the Office Action states that the claimed means for insulating is disclosed by item 74 in FIG. 7. However, this figure refers to a portion of the electrical interface system 60. Additionally, the Office Action states that the claimed means for receiving is disclosed by item 68 of FIG. 6 in the *Scheffelin* reference. However, item 68 is a wire bond lead that is part of the electronic interface system and does not lie flush with a means for insulating. Diversely, as shown in FIG. 6, wire bond lead 68 is coupled to bond pads 41, 66, where one of the bond pads is coupled to a conductive path 64

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extending through multi-layer substrate 34. Therefore, wire bond lead 68 is not generally shown to lie flush against an insulating feature, as described in the claim.

For at least the aforementioned reasons, *Scheffelin* does not teach or suggest at least all of the claimed features of claim 25. Therefore, claim 25 is not anticipated by *Scheffelin*, and the rejection should be withdrawn for at least this reason alone.

d. Claims 26-30

Because independent claim 25 is allowable over the cited art of record, dependent claims 26-30 (which depend from independent claim 25) are allowable as a matter of law for at least the reason that dependent claims 26-30 contain all the elements and features of independent claim 25. For at least this reason, the rejections of claims 26-30 should be withdrawn.

Additionally and notwithstanding the foregoing reasons for the allowability of claims 26-30, these dependent claims recite further features/steps and/or combinations of features/steps (as is apparent by examination of the claims themselves) that are patentably distinct from the cited art of record. Hence, there are other reasons why these dependent claims are allowable.

e. Claim 35

As provided in independent claim 35, Applicants claim:

A method of insulating a flexible lead from a substrate in a fluid ejection device which ejects fluid from a nozzle in response to a signal received through the flexible lead, the method comprising:

providing the substrate having first and second surfaces joined along an edge;

coupling the flexible lead to a firing element associated with the nozzle and responsive to the firing signal;

insulating the flexible lead from the substrate via an insulating feature supported by the first surface adjacent to the edge; and

routing the flexible lead flush against the insulating feature.

(Emphasis added).

Applicants respectfully submit that independent claim 35 is allowable for at least the reason that *Scheffelin* does not disclose, teach, or suggest at least "routing the flexible lead flush against the insulating feature," as recited and emphasized above in claim 35.

In expressing the rejection of claim 35, the Office Action states that the claimed insulating feature is disclosed by item 74 in FIG. 7. This figure refers to a portion of the

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electrical interface system 60. Additionally, the Office Action states that the claimed flexible lead is disclosed by item 68 of FIG. 6 in the *Scheffelin* reference. However, item 68 is a wire bond lead that is part of the electronic interface system and does not lie flush with item 74. Rather, as shown in FIG. 6, wire bond lead 68 is coupled to bond pads 41, 66, where one of the bond pads is coupled to a conductive path 64 extending through multi-layer substrate 34. Therefore, wire bond lead 68 is not generally shown to lie flush against an insulating feature, as described in the claim.

For at least the aforementioned reasons, *Scheffelin* does not teach or suggest at least all of the claimed features of claim 35. Therefore, claim 35 is not anticipated by *Scheffelin*, and the rejection should be withdrawn for at least this reason alone.

f. Claims 36-37

Because independent claim 35 is allowable over the cited art of record, dependent claims 36-37 (which depend from independent claim 35) are allowable as a matter of law for at least the reason that dependent claims 36-37 contain all the elements and features of independent claim 35. For at least this reason, the rejections of claims 36-37 should be withdrawn.

Additionally and notwithstanding the foregoing reasons for the allowability of claims 36-37, these dependent claims recite further features/steps and/or combinations of features/steps (as is apparent by examination of the claims themselves) that are patentably distinct from the cited art of record. Hence, there are other reasons why these dependent claims are allowable.

3 Response To Rejections of Claims Under 35 U.S.C. §103

In the Office Action, claims 14-17 and 38 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Scheffelin* in view of *Daggs* (U.S. Patent No. 5,422,667). It is well established at law that, for a proper rejection of a claim under 35 U.S.C. §103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. See, e.g., *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

All of the claimed features of independent claims 1 and 35 are not taught and suggested by *Scheffelin*, as previously discussed. Further, the cited art of *Daggs* fails to cure the deficiencies of the *Scheffelin* reference in suggesting or teaching all of the claimed features in

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claims 14-17 and 38 (which depend from respective independent claims 1 and 35). Therefore, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Scheffelin* in view of *Daggs* has not been made. Therefore, the rejections of claims 14-17 and 38 should be withdrawn.

Additionally and notwithstanding the foregoing reasons for the allowability of claims 14-17 and 38, these dependent claims recite further features/steps and/or combinations of features/steps (as is apparent by examination of the claims themselves) that are patentably distinct from the cited art of record. Hence, there are other reasons why these dependent claims are allowable. For example, the Office Action suggests that the cartridge housing 10 having end 12 and extension 28 in *Daggs* discloses the features of claim 14. However, the cartridge housing 10 in *Daggs* is not an ink ejecting nozzle layer, as described in the claim. As a result, *Daggs* fails to disclose the alleged claimed features.

For at least these reasons, the rejections of claims 14-17 and 38 should be withdrawn.

CONCLUSION

For at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,


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